OIS001- INTRODUCTION TO DATABASE MANAGEMENT

Credit Hours: 3 Semester Hours
Related TAG: Information Systems
Student Learning Outcomes marked with an asterisk (*) are considered essential and must be covered:
Learning outcomes 1. Understand the role of databases and database management systems in managing organizational data and information. *
Learning outcome 2. Understand the historical development of database management systems and logical data models. *
Learning outcome 3. Use a conceptual data modeling technique (such as entity-relationship modeling) to capture the information requirements for an enterprise. *
Learning outcome 4. Design and normalize relational databases to at least the third normal form (3NF). *
Learning outcomes 5. Use the data definition, data manipulation, and data control language components of SQL in the context of one widely used implementation of the language. *
Learning outcomes 6. Perform simple database administration tasks. *
Learning outcomes 7. Understand the concept of database transaction and apply it appropriately to an application context. *
Learning outcomes 8. Understand the role of databases and database management systems in the context of enterprise systems. *
Learning outcomes 9. Understand the key principles of data security and identify data security risk and violations in data management system design. *
Learning outcomes 10. Demonstrate the use of stored procedures and triggers for client/server computing.

OIS002- INTRODUCTION TO PROGRAMMING

Credit Hours: 3 Semester Hours
Related TAG: Information Systems
Student Learning Outcomes marked with an asterisk (*) are considered essential and must be covered:
Learning outcomes 1. Understand information technology fundamentals and use basic software applications to solve problems. *
Learning outcomes 2. Design logical solutions using pseudocode and/or flowchart to solve programming problems. *
Learning outcome 3. Identify data types and use variables for input and output operations. *
Learning outcomes 4. Demonstrate the ability to use operators to create logical expressions, mathematical calculations, and assignment statements. *
Learning outcome 5. Build conditional logic using Boolean expressions and decision structures. *
Learning outcomes 6. Construct loops to implement iterative logic. *
Learning outcomes 7. Create and use functions and modules. *
Learning outcomes 8. Utilize data structures, such as an array, to store and manipulate a collection of related elements. *
Learning outcomes 9. Properly use error checking, debugging, and data validation. *
Learning outcomes 10. Demonstrate the use of introductory object-oriented programming principles.

OIS003- SYSTEMS ANALYSIS & DESIGN

Credit Hours: 3 Semester Hours
Related TAG: Information Systems
Student Learning Outcomes marked with an asterisk (*) are considered essential and must be covered:
Learning outcomes 1. Understand the types of business needs that can be addressed using information technology-based solutions. *
Learning outcome 2. Initiate, specify, and prioritize information systems projects and to determine various aspects of feasibility of these projects. *
Learning outcome 3. Clearly define problems, opportunities, or mandates that initiate projects. *
Learning outcome 4. Use at least one specific methodology for analyzing a business situation (a problem or opportunity), modeling it using a formal technique, and specifying requirements for a system that enables a productive change in a way the business is conducted. *
Learning outcomes 5. Within the context of the methodologies they learn, write clear and concise business requirements documents, and convert them into technical specifications. *
Learning outcomes 6. Communicate effectively with various stakeholders to collect information using a variety of techniques and to convey proposed solution characteristics. *
Learning outcome 7. Utilize project management methods to oversee systems projects. *
Learning outcome 8. Compare and articulate various systems acquisition alternatives, including the use of packaged systems (such as ERP, CRM, SCM, etc.) and outsourced design and development resources. *
Learning outcome 9. Design high-level logical system characteristics (user interface design, design of data and information requirements). *
Learning outcomes 10. Use contemporary tools for process and data modeling.
Learning outcomes 11. Incorporate principles leading to high levels of security and user experience from the beginning of the systems development process.
Learning outcomes 12. Analyze and articulate ethical, cultural, and legal issues and their feasibilities among alternative solutions.

OIS004- IT/IS PROJECT MANAGEMENT

Credit Hours: 3 Semester Hours
Related TAG: Information Systems
Student Learning Outcomes marked with an asterisk (*) are considered essential and must be covered:
Learning outcomes 1. Initiate, specify, and prioritize information systems projects and to determine various aspects of feasibility of these projects. *
Learning outcome 2. Understand the foundations of project management, including its definition, scope, and the need for project management in the modern organization. *
Learning outcome 3. Understand the phases of the project management lifecycle. *
Learning outcome 4. Manage project teams, including the fundamentals of leadership and team motivation. *
Learning outcomes 5. Manage project communication, both internal to the team, and external to other project stakeholders. *
Learning outcomes 6. Initiate projects, including project selection and defining project scope. ****
Learning outcome 7. Manage project schedules with appropriate techniques and tools. *
Learning outcome 8. Manage project resources, including human resources, capital equipment, and time. *
Learning outcome 9. Manage project quality, including the identification of the threats to project quality, techniques for measuring project quality, and the techniques for ensuring project quality is achieved. *
Learning outcomes 10. Manage project risk, including the identification of project risk, and the techniques for ensuring project risk is controlled. *
Learning outcome 11. Manage the project procurement process, including understanding external acquisition and outsourcing, as well as the steps for managing external procurement. *
Learning outcomes 12. Close projects, including administrative, personnel, and contractual closure. *

Learning outcomes 13. Manage project execution, including monitoring project progress and managing project change, and appropriately documenting and communicating project status.
Learning outcomes 14. Control projects through information tracking and cost and change control techniques**.**
Learning outcomes 15. Understand the mechanisms for dealing with legal issues in complex project contexts.
Learning outcomes 16. Appreciate ethnic cultural differences in working with global teams either internal to organizations or by engaging offshore outsourcers.